AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below:

1. — 20. **(Canceled)**

21. **(Previously presented)** A method for isolating one or more different-sequence polynucleotides from a mixture, the method comprising:

(a) flowing the mixture through a flow path containing a plurality of solid supports which are located in series in the flow path, such that the mixture flows serially through each of the plurality of solid supports, each support having bound thereto a sequence-specific capture agent complementary to a different-sequence polynucleotide, under conditions effective to specifically bind different-sequence polynucleotides to corresponding sequence-specific capture agents on one or more of the supports,

(b) after said specific binding, releasing bound polynucleotides from a selected support by altering a physical property of that support while leaving unaltered the same physical property of at least one other of the supports, wherein the physical property is temperature, and wherein said releasing is accomplished by heating a first solid support; and

(c) eluting the released polynucleotides through the flow path such that the eluted polynucleotides can be isolated in separated form.

22. **(Previously presented)** The method of claim 21, wherein said altering further comprises selectively heating a second solid support to release bound polynucleotides therefrom, to allow preferential elution of the polynucleotides released from the second solid support.

23. **(Previously presented)** The method of claim 22, wherein heating of the first and second supports is performed simultaneously, and the polynucleotides released thereby are eluted in separate form, without mixing with each other.

24. **(Previously presented)** The method of claim 21, wherein (i) the polynucleotide mixture comprises a plurality of different polynucleotide populations, each different polynucleotide population comprising a plurality of different polynucleotides that contain a distinct sequence associated with that population, and (ii) different sequence-specific capture

agents on the different solid supports are complementary to different polynucleotide populations in the mixture.

25. **(Previously presented)** The method of claim 21, wherein the polynucleotide mixture comprises a plurality of sequencing ladders.

26. **(Previously presented)** The method of claim 21, wherein the polynucleotide mixture comprises a plurality of PCR products.

27. **(Previously presented)** The method of claim 21, wherein the polynucleotide mixture comprises a plurality of ligation products.

28. **(Previously presented)** The method of claim 21, wherein the different-sequence polynucleotides in the mixture include recovery tags for which the capture agents are complementary.

29. **(New)** The method of Claim 21, wherein all of the solid supports in the flow path are located sequentially in the flow path.

30. **(New)** The method of Claim 21, wherein all of the mixture flows through every one of the solid supports as the mixture proceeds down the flow path.

31. **(New)** The method of Claim 21, wherein the solid support has an external surface and the flow path is defined by a structure having an internal surface, and wherein the external surface of the solid support abuts the internal surface of the flow path so that the mixture flows through the solid support in order to proceed down the flow path.

32. **(New)** The method of Claim 21, wherein the solid support has an external surface and the flow path is defined by a structure having an internal surface, wherein the external surface of the solid support is immediately surrounded by the internal surface of the structure defining the flow path.

33. **(New)** The method of Claim 21, wherein the solid support has an external surface and the flow path is defined by a structure having an internal surface, wherein the structure defining the flow path is a cylindrical tube made of heat-shrinkable plastic, and wherein the heat-shrinkable plastic immediately surrounds the external surface of the solid support.

34. **(New)** The method of Claim 21, wherein the flow path is defined by a column.

35. **(New)** The method of Claim 34, wherein the column is a cylindrical column.

36. **(New)** The method of Claim 35, wherein the solid support is a cylindrically shaped frit.

37. **(New)** The method of Claim 36, wherein an external surface of the cylindrically shape frit is immediately surrounded by an internal surface of the column so that all of the mixture flows through the solid support in order to proceed down the flow path.

38. **(New)** The method of Claim 21, wherein the heating of the solid support is achieved via a heating element that enwraps the solid support.

SUMMARY OF INTERVIEW

Exhibits and/or Demonstrations

None

Identification of Claims Discussed

Claims 10 and 21 were discussed.

Identification of Prior Art Discussed

Zanzucchi, Okano, and Brenner, all of record. The Examiner noted additional possible art, including U.S. Pat. Nos. 5,811,296 and 5,422,271.

Proposed Amendments

None

Results of Interview

During the telephonic interview of January 23, 2007 between Examiner Bradley Sisson and Applicants' representative Eli Loots, the various teachings of the above three references were discussed. It was agreed that Okano does not teach the specific heating of one substrate without heating a second. In particular, it was agreed that the heating of a bulk solution, as in Okano, would heat the entire array at once. This was contrasted with the claimed method.

Applicants note the following clarifying remarks in regard to the Examiner's Interview Summary mailed January 31, 2007.

Applicants' representative did not agree that Okano teaches eluting the specific nucleotides in the manner claimed.

It is noted that Claim 21 was discussed in the interview instead of Claim 22, as described in the Examiner's interview summary.

Applicants' representative did not agree that Brenner teaches a one-dimensional array. Applicants' representative noted that the only array in Brenner appears to be a two-dimensional array (as noted in FIG. 3) and that the flow path in Brenner (shown in FIG. 3) does not require that the mixture flow serially through each one of the plurality of solid supports. It was pointed

out that there appears to be no reason for Brenner to use a linear array, as it teaches the simultaneous observation of numerous samples at once, as shown in FIG. 3.

Applicants' representative did not agree that the Examiner's proposed motivation regarding the combination of Brenner and Zanzucchi was adequate. Further, no motivation or reason to combine the Examiner's proposed teaching of Brenner (regarding the asserted linear array of clusters of beads) with the arrangement in Zanzucchi was provided in the interview. Additionally, no reason was provided during the interview as to why one would place capture probes on beads and then add them to the wells in Zanzucchi.

The Examiner did note that Zanzucchi disclosed a heating element for a heated well. It was discussed that the heater for the well was designed for heating the solution in the well in order to perform desired enzymatic reactions or inactivation. The Examiner only noticed this teaching during the interview and its relevance to the claimed invention was not discussed.

Applicants have attempted to address those portions of the extensive interview summary that seem relevant to this response. To the extent that some aspect in the Examiner's Interview Summary is not addressed above, Applicants' do not necessarily agree or disagree with the Examiner's summary.